



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,507	06/06/2001	John B. Condon	BLD920000065US1	9324

7590 12/10/2004
David W. Lynch
Crawford Maunu PLLC
1270 Northland Drive, Suite 390
Mendota Heights, MN 55120

EXAMINER

LEE, TOMMY D

ART UNIT	PAPER NUMBER
----------	--------------

2624

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,507

Applicant(s)

CONDON ET AL.

Examiner

Thomas D. Lee

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8,10-14,20-23,25,26,28 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 2,5,9,15-19,24,27 and 29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20020321</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 6, 8, 10, 13, 14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,774,146 (Mizutani).

Regarding claims 1, 3, 4, 6, 8 and 10, Mizutani discloses a method for providing improved print quality regardless of media smoothness, comprising: ascertaining information regarding the smoothness of media (print paper discrimination sensor 18 (column 4, lines 51-56) constructed from a scanner 181 (column 4, line 65 – column 5, line 7)); and utilizing the information about the media smoothness in the generation of an output (color-conversion table Ti selected in correspondence to a detected paper kind, for conversion of print data (column 5, lines 49-65)). The ascertaining further comprises identifying a smoothness level for the media (discrimination sensor may be designed to measure surface roughness of print paper (column 8, lines 22-24)), and storing information with a print job, wherein the information comprises a smoothness parameter associated with the print job (ROM 8 may be stored with various parameters of the various kinds of papers (column 8, lines 27-32)). The identifying further comprises manually providing the smoothness level to a print device (print data produced in accordance with a print instruction supplied from external device A (column

Art Unit: 2624

3, lines 24-27), smoothness level inherently associated with desired paper type), which is a printer (color ink jet printer (column 4, lines 1-2)); projecting light on media to be printed on, gathering reflected light from the media, generating a signal indicating a smoothness level for the media and processing the signal indicating the smoothness level for the media to quantify the media (light reflectance and friction coefficient of paper measured (column 8, lines 37-41)).

Regarding claims 13, 14 and 20, Mizutani discloses a print device, comprising: a marker system for rendering a page layout on a medium (print portion G (column 3, lines 33-37)); and a smoothness processing system, coupled to the marker system, the smoothness processing system ascertaining information regarding the smoothness of media and controlling the marker system in response to the ascertained information about the media smoothness (print paper discrimination portion D (column 3, lines 28-30)). The smoothness processing system comprises a user input interface for manually entering a media smoothness indicator (print data produced in accordance with a print instruction supplied from external device A (column 3, lines 24-27), smoothness level inherently associated with desired paper type). The smoothness processing system receives the smoothness of the media that is associated with and stored with a print job (discrimination sensor may be designed to measure surface roughness of print paper (column 8, lines 22-24); ROM 8 may be stored with various parameters of the various kinds of papers (column 8, lines 27-32)).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 7, 23, 25, 26, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani.

Regarding claim 7, Mizutani does not disclose a digital copier. However, one of ordinary skill in the art would have recognized that the method of generating an output on the basis of a level of smoothness of print media, as disclosed in Mizutani, would prove beneficial for providing an optimal output image in any type of printer or copier that is capable of printing on different types of paper; and thus it would have been obvious for one of ordinary skill in the art to modify the teaching of Mizutani for use with a digital copier.

Claims 23, 25, 26, 28 and 30 recite a program storage medium readable by a computer, for performing the steps of above-rejected claims 1, 3, 4, 8 and 10, respectively. While not disclosed in Mizutani, it is generally well known that process steps may be stored in a memory disk or the like so as to be performed by a computer, and thus these claims are rejected as set forth above.

6. Claims 11, 12, 21, 22, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani as applied to claims 1, 13 and 23 above, and further in view of U.S. Patent 4,876,606 (Banno et al.).

Regarding claims 11, 21 and 31, Mizutani does not disclose communicating to a host when media having a smoothness required according to the information is not available in the print device. Banno et al. disclose an image forming system, wherein a printer communicates status information, including quantity of print media, to a host system (column 4, lines 12-28; column 5, lines 26-43). Providing a means for communicating such information with a host enables an operator and serviceman to foresee problems which may occur in the printer before they actually occur, and thus the printer can be maintained in an optimum operating state (column 5, lines 32-43). Therefore, it would have been obvious for one of ordinary skill in the art to modify the teaching of Mizutani by providing a means for communicating status information, such as quantity of print media, with a host system, such as disclosed in Banno et al. Whether or not the communication is through bi-directional print stream is a matter of design choice, so long as the status information is communicated from the printer to the host.

Regarding claims 12, 22 and 32, an embodiment disclosed in Banno et al. provides for a fault display, which may be communicated to host system when there is a shortage of paper in a printer (column 6, lines 58-68).

Allowable Subject Matter

7. Claims 2, 5, 9, 15-19, 24, 27 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to disclose or suggest the use of a halftone screen related to information about media smoothness, as recited in the objected-to claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,654,143 (Dalal et al.) discloses a method of adjusting an image production system to account for a variable property of a desired output medium.

U.S. Publication 2002/0085233 (Degani et al.) discloses a method for updating calibrated tone-reproduction curves corresponding to a distinct media type and halftone type combination along with a plurality of predetermined relationships between each stored calibrated tone-reproduction curve and a reference media type and reference halftone type combination.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-

Art Unit: 2624

4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas D. Lee
Primary Examiner
Art Unit 2624

tdl
December 9, 2004